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## **The evolution of Initial Public Offerings in Italy**

**Francesco Dalle Vedove<sup>a</sup>, Giancarlo Giudici<sup>b</sup>, Pier Andrea Randone<sup>c</sup>**  
**June 2005**

### **Abstract**

In recent years, the IPO market in Italy has deeply changed, with respect to the ‘rules of the game’ and the characteristics of floating companies, both of which converged to the US practice.

In this study we consider all IPOs of firms listed from 1985 to 2004 in Italy, with the aim of analysing the evolution of four patterns: (i) the players involved, (ii) the complexity of clauses reported in the offering prospectus, (iii) the setting of the IPO price, (iv) the initial and long run market performance.

We highlight that Italian firms going public through an IPO are younger and less profitable than in the past, raise more equity capital, are characterised by a less concentrated ownership structure, and are more frequently participated by pre-IPO private equity investors.

We show that Italian IPOs adopted several features of the going public process in the US (green shoe, lock-ups, book building). The pricing process has considerably changed, postponing the setting of the IPO price after the emission of the prospectus, and then after the public offering itself, in order to incorporate all available information in the price. As a consequence, nowadays IPO pricing in Italy is somewhat even more efficient than in the US and in other European markets: the initial underpricing has considerably reduced after 2000 as well as the long run underperformance compared to the market general index.

**Keywords:** IPOs, Italian Exchange, New Listings

**JEL:** G30, G32

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## **L'evoluzione delle Offerte Pubbliche Iniziali in Italia**

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**Giugno 2005**

### **Abstract**

Il mercato italiano delle Offerte Pubbliche Iniziali finalizzate alla prima quotazione di un'impresa si è profondamente evoluto negli ultimi anni, diventando sempre più simile a quello americano sia rispetto alle 'regole del gioco' sia rispetto alle caratteristiche delle 'matricole' di Borsa.

In questo lavoro vengono analizzate tutte le Offerte Pubbliche Iniziali condotte da imprese quotate sulla Borsa Italiana dal 1985 al 2004, focalizzando in particolare su: (i) gli 'attori' coinvolti nel processo, (ii) la complessità delle informazioni contenute nel prospetto informativo, (iii) la decisione del prezzo dell'offerta, (iv) la performance di mercato nel breve e lungo periodo.

Viene mostrato che le 'matricole' quotate sulla Borsa Italiana nel corso del tempo tendono a essere più giovani e meno profittevoli rispetto al passato, raccolgono un maggiore ammontare di capitale alla quotazione, sono caratterizzate da una struttura proprietaria meno concentrata, e sono più spesso anche partecipate prima della quotazione da investitori professionali del *private equity*.

Quindi, viene riscontrata la tendenza a organizzare il processo di Offerta Pubblica seguendo le modalità tradizionalmente diffuse negli USA (opzione di *green shoe*, clausole di *lock-up*, attività di *book building*). La determinazione del prezzo dell'offerta avviene ora dopo l'emissione del prospetto informativo, e spesso anche dopo l'offerta stessa, in maniera tale da incorporare nella decisione tutte le informazioni disponibili fino alla quotazione. I risultati relativi alla performance di mercato delle 'matricole' mostrano che negli ultimi anni il processo di *pricing* è diventato sempre più efficiente, anche rispetto agli USA e ad altri mercati europei: il rendimento del primo giorno di quotazione (*underpricing*) si è significativamente ridotto a partire dal 2000, così come la performance negativa di lungo periodo dopo la quotazione, confrontata con il rendimento degli indici di mercato, è meno penalizzante rispetto al passato.

*Keywords:* IPOs, Italian Exchange, New Listings

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## **1. Introduction**

An Initial Public Offering, IPO, is a placement of financial securities, in particular equity shares, aimed at the first flotation of a company on a stock exchange. A new listing is not always preceded by an IPO, but the public offering is necessary whenever the equity capital of the floating company is not sufficiently ‘dispersed’ among investors. In other words, a firm that wants to join a stock exchange and is characterised by a restricted number of investors (typically entrepreneurs and familiars, managers, private equity investors and venture capitalists) organises an IPO in order to build up the floating capital to be marketed in the exchange.

In Italy, Borsa Italiana SpA (the manager of the Italian Exchange) has invested many efforts in the last few years to attract firms to the listing, as well as several provisions (for example the tax benefits granted by the ‘legge Tremonti’ and the Dual Income Tax reform) have been approved in order to favour the listing of small and medium size industrial companies. Indeed, several recent studies highlighted a positive correlation between the vivacity of the IPO market and the growth of the economy, both in term of innovation and employment (Black and Gilson, 1998; Kortum and Lerner, 2000; Jeng and Wells, 2000; Giudici and Paleari, 2002). The progress of the Italian government’s privatization programme contributed to the flow of new IPOs.

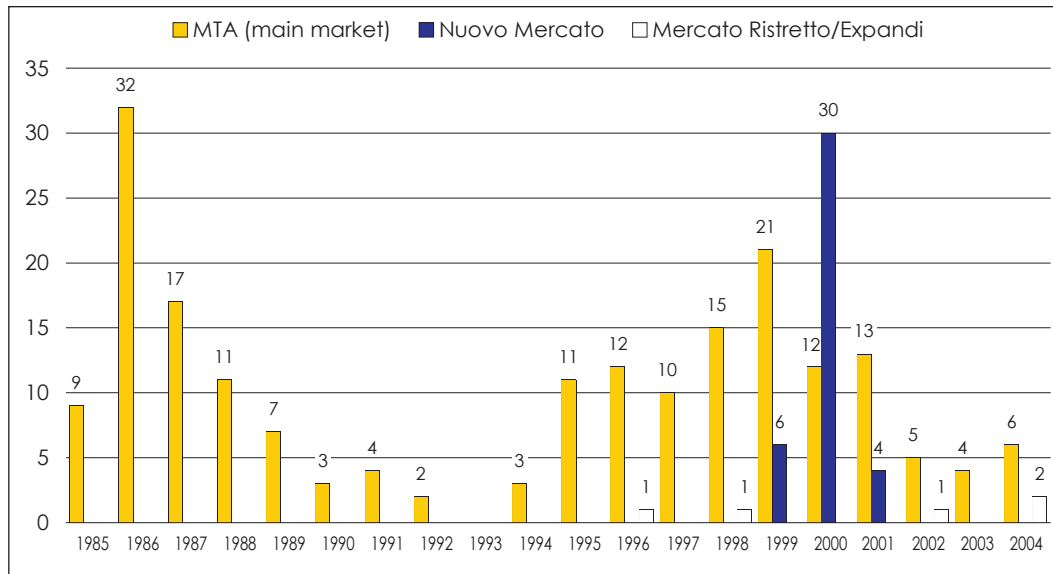
Alongside, the Italian stock market experienced a significant evolution, with the privatisation of the Exchange and the reform of listing requirements (in 1998), the advent of the Euro (1999), the establishment of new markets and segments (the Nuovo Mercato in 1999, the STAR segment in 2001, the Expandi market, that replaced the Mercato Ristretto in 2003, TechSTAR in 2004). New law provisions and corporate governance devices have been introduced regarding corporate and group accounting, disclosure, protection of minority shareholders, disciplines of takeovers and insider dealing.

Thanks also to the favourable momentum of the stock market indexes, culminated in 1999 and in the first months of 2000, Borsa Italiana experienced a sensible increase in the number of IPOs (see figure 1). By contrast, after the burst of the ‘new economy’ bubble and the dramatic crises in the international environment, the flow of IPOs steadily slowed down in Italy as well as in Europe and the US, and has regained vigour only in the recent months, although the IPO flow is still by no means comparable to the more consistent number of firms going public in the USA and UK. The last IPO on the Nuovo Mercato has been registered in 2001, and the Mercato Ristretto/Expandi hosted only 5 IPOs in the last 10 years (2 in the last year after the reform of the market and the redenomination to Mercato Expandi). Remarkably, companies listed following an IPO from 1990 up to 2004 represent more than 50% of firms currently traded on the Italian Exchange<sup>1</sup>.

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(1) Figure 1 does not report new listings without public offering (spin-offs and admission to trading of companies with a dispersed ownership such as cooperative enterprises), transfers among the different Italian equity markets or segments, cross-listings and seasoned public offerings of companies already traded in foreign exchanges (Bayer, Volkswagen, Commerzbank, Eridania-Beghin Say, ST Microelectronics, Banco Bilbao Vizcaya, Banco Santander, Mannesmann, Luxottica, AISoftw@re, BB Biotech, Algol).

**Figure 1 - IPOs filed in Italy from 1985 to 2004, by year of listing**



This work reviews the evolution of the IPO market in Italy during the last twenty years, depicting the changes in the characteristics of the firms involved, and focussing on four different topics: (i) the players involved, (ii) the complexity of the IPO clauses contained in the offering prospectus, (iii) the setting of the IPO price, (iv) the initial (and following-on) market performance of the IPO shares.

Regarding the changes in IPO characteristics, we highlight that younger and less profitable firms went public, more frequently raising new equity capital. Although closely controlled by incumbent shareholders both before and after the listing, the companies that go public are now characterised by a less concentrated ownership and are more similar to their European and US counterparts.

New players have been involved into the IPO process. Institutional investors are involved both in the sell-side of the IPO (assisting the companies as consultants, underwriters, sponsors and specialists) and in the demand-side (joining private placements alongside the public offering for retail investors). We show that the fraction of IPO shares allotted to institutions has been growing in recent years, especially for small offerings. We also find that the presence of pre-IPO private equity investors (in particular venture capitalists) has become more frequent.

We highlight a growing complexity of the IPO procedures, with the introduction of several features imported from the US market (the ‘green shoe’ option, the ‘book building’ activity, ‘lock-up’ provisions, IPO incentives for employees and managers).

As far as the IPO price is concerned, we detect a tendency of the offering parties to postpone, as much as it is possible, the setting of the final offer price, in order to incorporate all information collected during the IPO process. Auctioned IPOs disappeared in the late 1980s, as well as fixed price IPOs in the mid 1990s. Nowadays the most diffused procedure to price an IPO is to indicate a referring (but not binding) range in the prospectus (as in the US practice), to set the maximum price before the public offering and



the final price after the collection of bids from retailers.

Finally, we tracked the initial and long run market performance of Italian IPOs. We find that the mean IPO initial return (underpricing) has been decreasing and nowadays it is not statistically different from zero. This suggests that the evolution of IPO procedures contributed to a better efficiency of the pricing process. The IPO long run performance has been variable: firms listed in the mid 1990s are characterised by long run poor returns compared to the market index, while recent issues seem to overperform the market.

The work concludes with an agenda of provisions that may further improve the efficiency of the IPO market in Italy.

## 2. The evolution of IPO characteristics

Figure 1 depicts the flow of IPOs on the Italian Exchange. Yet, it is interesting even to look at the economic characteristics of the companies that made these IPOs. Table 1 shows some statistics about the business sector of these companies, according to the classification adopted by Borsa Italiana SpA.

Five different phases may be distinguished in the recent history of the Italian Exchange. From 1985 to 1988, coinciding with a bullish market momentum, many companies went public. Yet, most of them were spin-offs of companies already listed on the stock market. Holding companies, banks, chemicals, electronics and construction firms have been the most represented categories.

From 1989 to 1994, the market experienced a ‘cold’ period for new listings. In six years, only 19 IPOs were filed in Italy. Financial companies have been predominant.

**Table 1 - IPOs in Italy from 1985 to 2004, by business sector (classification adopted by Borsa Italiana SpA)**

Business sector	1985-1988	1989-1994	1995-1997	1998-2000	2001-2004	Total
Financial:	22	10	4	9	2	47
- Banking	7	2	3	7	-	19
- Financial Services	2	3	-	1	1	7
- Holding companies	9	2	-	-	-	11
- Insurance	3	1	1	1	-	6
- Real estate	1	2	-	-	1	4
Industrial:	40	7	26	34	17	124
- Automotive	2	-	3	2	-	7
- Chemical	7	1	4	3	4	19
- Construction	9	1	1	1	1	13
- Electronics – Electromechanical	11	3	7	12	2	35
- Food	-	-	1	3	1	5
- Machinery – Mechanical	4	-	3	3	4	14
- Mineral – Metals – Petroleum	1	-	2	-	-	3
- Miscellaneous	1	-	-	4	3	8
- Paper	1	-	1	1	-	3
- Textiles – Clothing – Accessories	4	2	4	5	2	17
Services:	7	2	4	42	16	71
- Distribution	-	-	-	4	-	4
- Media and Entertainment	4	-	1	13	2	20
- Public utilities	1	1	1	7	6	16
- Transportation – Tourism	2	1	2	2	3	10
- Other services	-	-	-	16	5	21

The period between 1995 and 1997 has been characterised by many small and medium size industrial firms going public, taking the opportunity of a positive market momentum and tax benefits granted by the ‘legge Tremonti’. Remarkably, no holding companies (i.e. companies with no relevant operating activities other than holding shares of other listed companies) went public in Italy from this period on.

The period from 1998 to 2000 has been characterised by the world-wide ‘bubble’ for technology IPOs. This has been the ‘hottest’ period for IPOs in Italy, with a record



level of 42 IPOs in 2000. Companies in the ‘services’ categories (media, software, information technology) have been the most represented. Also this period was favoured by the existence of tax incentives for capital increases (Dual Income Tax), in particular for IPOs (Super DIT).

From 2001 to 2004, after the burst of the bubble, a new decline in the number of IPOs has been registered, even if there are signals of a progressive revival of interest. In this period, it is remarkable the number of public utilities that went public with an IPO.

Not surprisingly, the time series of IPO volume reflects favourable market conditions<sup>2</sup>, since positive market momentum attracts additional investors to the market and increases the demand for shares (Lowry, 2003). Moreover, Lowry and Schwert (2002) show that a significantly positive market performance by a few IPOs induces additional firms to go public, generating a lead-lag relationship between IPO initial returns and aggregate volume of issues. This explains the large number of IPOs in 2000, despite the market was already experiencing a fall after April.

‘Hot’ and ‘cold’ markets tend to alternate and generate clustering of IPOs even at the industry level. The literature strongly supports the hypothesis that issuers go public during a temporary ‘window of opportunity’ and price information from past IPOs spills over to current and future offerings, affecting the decision to go public (Benveniste, Ljungqvist, Wilhelm and Yu, 2003). An example has been the euphoria for Internet-stocks in 1999 and 2000.

Table 2 details some basic statistics about the IPO sample analysed in this work and depicts an evolution of the characteristics of the firms across the two decades.

IPOs are first classified by issue type, considering if offered shares are exclusively newly issued shares (*Offerta Pubblica di Sottoscrizione*, OPS), or existing shares sold by pre-IPO owners (*Offerta Pubblica di Vendita*, OPV), or both new and existing shares (*Offerta Pubblica di Vendita e Sottoscrizione*, OPVS). Statistics report that from 1985 to 1988 less than 50% of the companies raised new capital; in 1989-1994 this percentage grows up to 68% (while IPOs with secondary sales decrease from 64% to 58%). Remarkably, in 1995-1997 most of the IPOs placed both primary and secondary sales. This tendency has been confirmed in 1998-2000 and in 2001-2004, when the fraction of companies issuing only new shares has been growing<sup>3</sup>.

Equity carve-outs (ECOs, i.e. firms controlled by a company or a group of companies already floated) have been frequent especially from 1985 to 1988. In such period many listed companies took advantage of the bullish market momentum to spin-off subsidiaries and place minorities stakes on the exchange. This allows financially-constrained controlling shareholders to build up business groups and raise money without losing firm’s control (Giorgino, Giudici and Paleari, 2001). Independent newly listed firms are instead largely predominant from 1995.

In 7 cases (all between 1986 and 1987) IPO shares were exclusively restricted

(2) The correlation coefficient between the number of new listings in each year and the market index performance in the previous year is equal to 64%.

(3) IPOs on the Nuovo Mercato must include an issuance of new shares (at least 50% of the offered shares must be newly issued). This conditions the statistics in 1999, 2000, and partially in 2001.

voting shares. This is a further technique to raise finance without diluting control rights over the company. In other 5 cases both common and restricted voting shares have been offered<sup>4</sup>.

Privatization IPOs (PIPOs) have been frequent across the whole period. During the 1980s privatizing companies have been essentially industrial companies directly or indirectly controlled by the Government, while in the 1990s banks and utilities controlled by other public entities (like local administrations) characterized the IPO flow. Remarkably, almost all of the privatizing companies both at the IPO and in the following years continued to be closely controlled by the public subjects.

Anyhow, privatizing companies account for more than 15% of the IPO activity in the last 20 years in Italy.

The mean company age across the sample is equal to 41 years (median value 28 years). Excluding ECOs and PIPOs, the mean age is equal to 32 years (median value 24 years). Nonetheless, we register a significant reduction in the mean value during the last six years, especially in the late 1990s compared to previous years.

Statistics about the accounting value of consolidated assets and gross revenues are very dispersed and reveal that very large companies alternated to smaller firms during the whole period. The mean and median company profit is positive across all the period, indicating that most of the companies were already profitable at the listing<sup>5</sup>.

The mean value of IPO proceeds is influenced by large privatizations in the early 1990s. Interestingly, the median value increases across the recent cohort periods, mainly in relation to the increase in the number of new primary shares issued. Excluding ECOs and PIPOs, the mean (median) IPO proceeds account for 93.941 euro million (45.043 euro million), with primary shares accounting on the average for 61.479 euro million (28.989 euro million) and secondary shares for only 32.012 euro million (7.644 euro million). Thus, the listing is an important opportunity for independent companies to raise new capital.

The firms of the sample are generally closely held by controlling shareholders before the IPO, and in a few cases they hold less than 50% of the equity capital after the listing. Companies in the 1980s and early 1990s appear to be more closely held than their counterparts in the mid and late 1990s. The statistics about ownership structure do not significantly change excluding ECOs and PIPOs, although (not surprisingly) the mean fraction of equity capital owned by controlling shareholders is lower both before (78.09%) and after (54.18%) the IPO.

Giudici and Roosenboom (2004) point out that from 1997 to 2000 the advent of 'New Markets' around Europe (in Italy the Nuovo Mercato) contributed to a reduction in

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(4) In the 1980s the practice to issue dual class shares was frequent, while in the 1990s the tendency reverted and many companies withdrew restricted-voting shares from the public float. The last cases in which a company placed at the IPO restricted voting shares were Istituto Bancario San Paolo di Torino in 1992 (preferred shares were allotted to employees) and GIFIM in 1991 (preferred shares were allotted to retail investors).

(5) Excluding 37 PIPOs and 43 ECOs, the mean (median) accounting value of consolidated assets is 337.809 euro million (108.293 euro million). The mean (median) value of gross revenues is 199.588 euro million (108.817 euro million). The mean (median) value of net profits is 10.278 euro million (3.882 euro million).



the mean age and size of listing firms. Traditionally, firms going public in continental Europe have been large established firms, with no need to finance future growth (Pagano, Panetta and Zingales, 1998). The authors highlight that the ownership structure of companies that made IPOs in Europe changed, as well. The average shareholding of CEOs and managers increased, while the ownership concentration and the frequency of sales of existing shares at the IPO decreased.

**Table 2 - Statistics about IPOs, by listing period <sup>(1)</sup>**

		1985-1988	1989-1994	1995-1997	1998-2000	2001-2004	Total sample
IPO sample		69	19	34	85	35	242
Issue type							
- OPV		35 (50.7%)	6 (31.6%)	3 (8.8%)	9 (10.6%)	4 (11.4%)	57 (23.6%)
- OPS		25 (36.2%)	8 (42.1%)	5 (14.7%)	26 (30.6%)	12 (34.3%)	76 (31.4%)
- OPVS		9 (13.1%)	5 (26.3%)	26 (76.5%)	50 (58.8%)	19 (54.3%)	109 (45.0%)
Equity carve outs		29 (42.0%)	5 (26.3%)	1 (2.9%)	6 (7.1%)	2 (5.7%)	43 (17.8%)
Privatization IPOs, controlled by							
- Government		13 (18.8%)	4 (21.0%)	2 (5.8%)	1 (1.2%)	2 (5.7%)	22 (9.1%)
- Other public entities		2 (2.9%)	1 (5.3%)	1 (2.9%)	7 (8.2%)	4 (11.4%)	15 (6.2%)
Firm age (years)	Mean	48	38	48	37*	32	41
	Median	37	36	40	19	16	28
Total assets (euro ML)	Mean	2 593.473	8 517.474*	2 327.339	2 200.979	837.199	2 629.324
	Median	230.168	227.075	162.553	70.395	258.213	155.736
Gross revenues (euro ML)	Mean	406.915	1 402.086**	1 804.250	429.681	323.453	677.293
	Median	146.013	160.836	157.640	76.764	186.927	122.743
Net profit (euro ML)	Mean	15.365	35.430*	79.387	43.935	29.962	38.158
	Median	11.972	5.359	7.967	3.054	7.061	5.466
IPO proceeds (euro ML)	Mean	74.663	421.848***	195.930	379.952	223.784	247.755
	Median	51.108	38.049	42.656	76.616	83.950	53.992
of which							
- primary shares (euro ML)	Mean	32.190	148.167**	47.365	88.727	96.500	72.587
	Median	1.271	27.742	23.785	35.133	27.990	25.371
- secondary shares (euro ML)	Mean	42.473	273.681**	148.565	291.224	127.284	175.168
	Median	20.953	5.502	14.231	13.740	6.629	11.718
Equity capital held by controlling shareholder(s)							
- before the IPO (%)	Mean	89.18%	88.99%	80.47%*	78.90%	78.96%	82.85%
	Median	100.00%	95.82%	78.70%	86.18%	89.25%	90.51%
- after the IPO (%)	Mean	69.10%	64.58%	55.73%**	51.95%	51.89%	58.35%
	Median	73.79%	69.13%	53.60%	53.20%	52.00%	58.52%

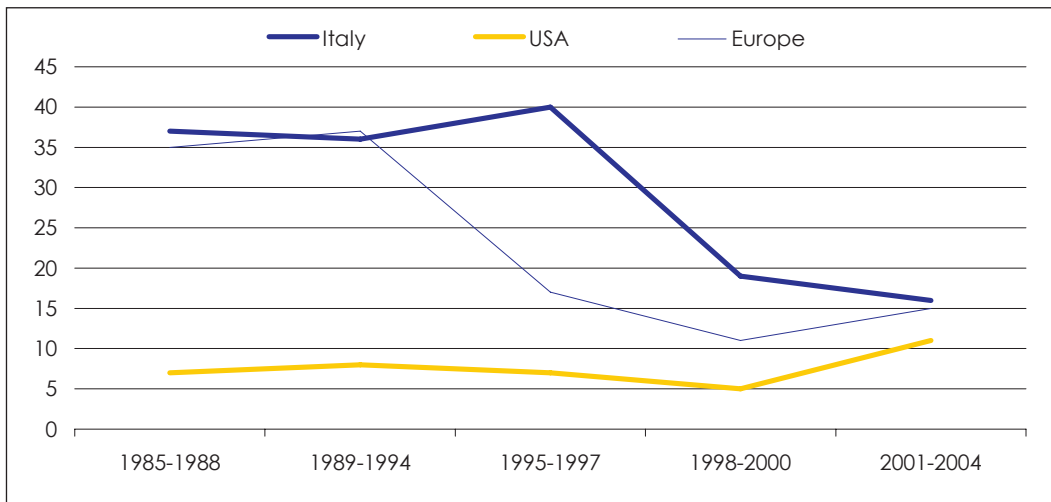
\*, \*\*, \*\*\* The mean is statistically different from the mean of the previous cohort year at the 90%, 95%, 99% levels respectively  
 (1) Sample: 242 companies listed following an IPO on the Italian Exchange from 1985 to 2004. Accounting data on consolidated basis, referring to the year prior to the listing

Figure 2 compares the median<sup>6</sup> age of companies that made IPOs in Italy, in the USA and in other European countries<sup>7</sup> from 1985 to 2004. The data confirm that the median age in Italy and Europe, compared to the median age of US IPOs, has been larger, but the gap decreased over time (in Italy especially in the period 1998-2000, in Europe already in the previous period). Interestingly, in the 'cold' period 2001-2004 the median age further decreased in Italy, while it slightly increased in Europe and in the US.

(6) We do not track the mean age, since it is heavily influenced by a small number of 'very old' IPOs (for example, Monte dei Paschi di Siena, established in 1472).

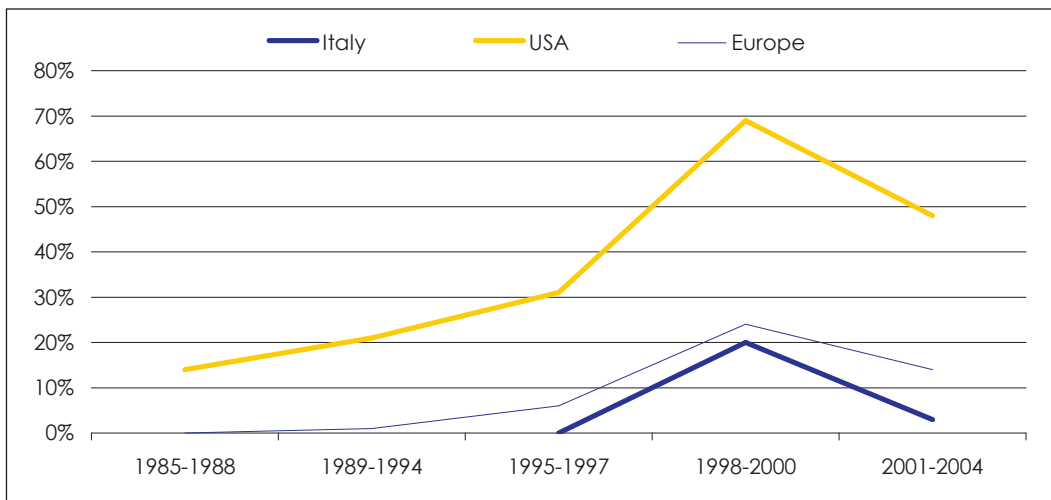
(7) European IPOs include firms listed in France, Germany, Belgium, the Netherlands and UK. We thank Peter Roosenboom for sharing the European statistics. Data for the USA are taken from Jay Ritter's database.

**Figure 2 - Median age of companies that made an IPO in Italy, USA, and in Europe (Belgium, France, Germany, the Netherlands, UK), by cohort period**



Source: Jay Ritter's database for USA, Giudici and Roosenboom's database for Europe

**Figure 3 - Fraction of IPO companies that reported zero or negative profits at the year before the listing, in Italy, USA, and in Europe (Belgium, France, Germany, the Netherlands, UK), by cohort period**



Source: Jay Ritter's database for USA, Giudici and Roosenboom's database for Europe

Figure 3 reports the percentage of firms with zero (or negative) profit at the year prior to the IPO, by cohort period. From 1985 to 1997, only profitable companies listed in Italy, since the listing requirements admitted to trading only companies with a three-year track of positive profits. During such period, the same tendency characterized the other major European exchanges, while in the US a growing percentage of companies (30% in 1995-1997) made their IPO with no profits in their accounts. Furthermore in 1998-2000, during the tech-boom, in the US only 31% of the IPOs involved companies already profitable, but this percentage rose back again to 51% in 2001-2004. In Europe and – to a



larger extent – in Italy, we still detect a lower probability of a non profitable company to join the board of the exchange.

On one hand, by accepting the listing of not profitable firms, a stock market may give an opportunity to growth companies to finance their future investments, but on the other hand risks perceived by investors may increase. Fama and French (2005) suggest that the lower profitability of US companies making IPOs (documented by figure 3) during the 1990s has been the main determinant of the decline in new listings survival rates, since weaker firms have been able to access public equity financing.

In sum, the evidence suggests that during the last 20 years the characteristics of Italian firms making IPOs changed and to some extent evolved towards the US figures. Younger and less profitable firms went public, more frequently raising new equity capital. Although closely controlled by incumbent shareholders both before and after the listing, Italian companies appear to be characterised by a less concentrated ownership than in the past.

Apart from the intrinsic characteristics of these firms, the next sections will show that even the offering process has changed, with respect to the players involved, the provisions contained in the IPO prospectus, the pricing process and the share performance after the listing.

## **2.1 The players involved**

An IPO is a risky and complex process. Risky, because it is associated with large sunk costs, and characterised by high uncertainty about its success. Complex, because several parties are involved in the project, alongside the listing firm and the IPO subscribers.

First, the issuing company hires consultants, auditors and legal counsels in order to plan the whole operation, and analyse all the consequences of the listing on its own internal organisation and business. Moreover, although it is not compulsory at all, financial intermediaries are hired, in order to underwrite the placement. Their role is crucial, because they have access to several channels to reach the market and place the shares to investors. Hiring prestigious underwriters may have a ‘certification’ effect on the quality of the IPO (Carter and Manaster, 1990).

Underwriters negotiate a fee which, in general, is not negligible. In the USA, Chen and Ritter (2000) show that it is almost equal to 7% of total IPO proceeds, both for large and small offerings, that is truly strange considering that scale economies in the acquisition of information and contacts should favour large offerings.

In Europe, Torstila (2001) computed an average spread of 4% (equally weighted), significantly lower than in the US. In Italian IPOs the spread varies from 1.5%-2.0% for large privatising companies up to 6.0%-6.5% for small offerings. Companies listing on the Nuovo Mercato are generally charged larger fees than other IPOs. The average spread has been decreasing in most recent years (3.78% on the average from 2001 to 2004 compared to 4.39% from 1998 to 2000).

In Italy we register a tendency of issuers to hire several underwriters, especially in large offerings. Alongside the global co-ordinators, frequently additional underwriters manage the portion of the offerings reserved to domestic institutions, and to foreign

investors<sup>8</sup>.

From 1998 the rules of Borsa Italiana impose that floating firms have to hire a sponsor certifying that the company complies with the listing requirements (a 'listing partner' in the Expandi market) and – eventually – a specialist (a sort of market maker with limited obligations) providing liquidity in the aftermarket.

An important role is played by institutional investors in equity capital, as well. Funds, limited trusts, banks and - above all - venture capitalists are described as experts in the field of company funding (Sahlman, 1990; Gompers and Lerner, 1999). They have superior capability to evaluate companies and engage in active monitoring and consulting activity. In particular, venture capital backing improves firm outcomes in the short and long run (Baker and Gompers, 2003).

The efficiency and liquidity of stock exchanges are essential conditions in order to favour private equity and venture capital investments (Black and Gilson, 1998). Such investors subscribe shares of start-up and developing privately-owned companies, with the aim to capitalise a gain in the future. The listing is a good way to exit the investment, by offering portfolio shares to the public. A market in which companies may access the exchange at low costs and without particular barriers is a good mean to promote private equity and venture capital, and therefore to allow growing companies to raise finance and promote new investments.

**Table 3 - Sample IPOs backed by venture capitalists and other private equity investors (PEIs)**

	1985-1988	1989-1994	1995-1997	1998-2000	2001-2004	Total sample
- IPOs backed by venture capitalists	-	-	3	14	9	26
(% on total IPOs)	-	-	8.8%	16.5%	25.7%	10.7%
- Mean VC pre-IPO ownership <sup>(1)</sup>	-	-	41.3%	36.1%	32.4%	35.4%
- Shares offered at the IPO by venture capitalists <sup>(2)</sup>	-	-	52.9%	32.0%	51.7%	41.2%
- IPOs backed by other PEIs	19	8	16	26	12	81
(% on total IPOs)	27.5%	42.1%	47.0%	30.6%	34.3%	33.5%
- Mean PE pre-IPO ownership <sup>(1)</sup>	22.7%	16.4%	28.1%	33.1%	13.3%	25.1%
- Shares offered at the IPO by PEIs <sup>(2)</sup>	22.6%	27.2%	40.6%	25.3%	33.9%	29.1%

(1) Where existing

(2) Mean % on respective shareholding, where existing

Table 3 reports data about the presence of venture capitalists in the pre-IPO equity capital of the sample firms (and of other private equity investors like commercial banks, open-end funds, financial trusts). From 1985 to 1994 no venture capitalists have been involved in the shareholding of the companies that made an IPO. In 1995-1997 only 3 companies were venture-backed (8.8% of the sample). In 1998-2000 and in 2001-2004 14 IPOs (16.5% of the sample) and 9 IPOs (a good 25.7% of the sample) were participated

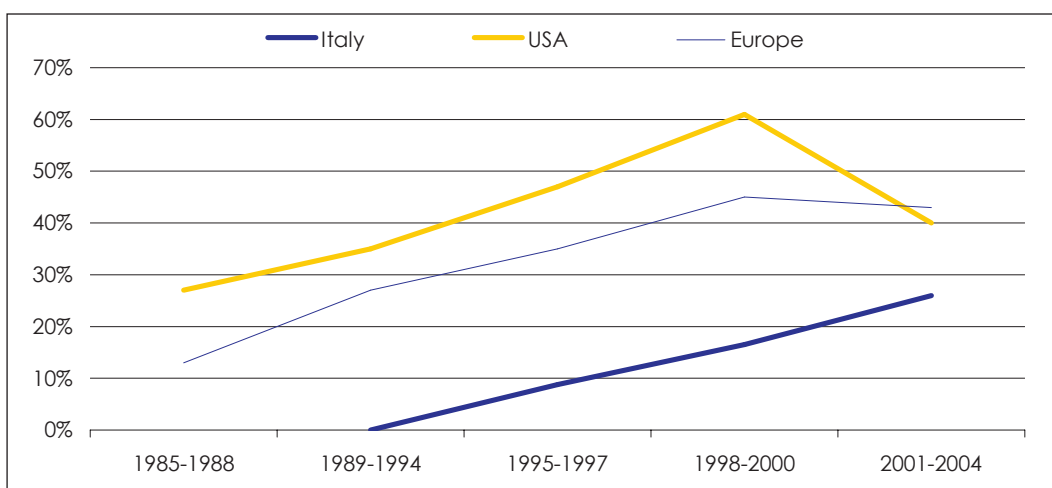
(8) A review of the evolution of timing and costs of going public in Italy is contained in Berretti, Di Massa, Farina, Orsini and Pellizzoni (2002).



by venture capitalists, respectively. Other private equity investors are more frequently involved in pre-IPO ownership (especially in financial companies going public like banks and insurance enterprises).

Figure 4 compares the number of VC backed IPOs in Italy, Europe (Belgium, France, Germany, the Netherlands, UK) and the USA. Not surprisingly, IPOs are more easily venture backed in the USA. From 1985, an increase in the fraction of VC backed IPOs has been registered, up to the level of 60% in 1998-2000, while a fall down to 40% has been registered in 2001-2004. In Europe, the trend is very similar and interestingly in 2001-2004 the percentage of VC backed IPOs has been larger in Europe than in the US. Italy is characterised by a significant lag compared to other countries, but the gap is steadily reducing.

**Figure 4 - Fraction of IPOs backed by venture capitalists in Italy, USA, and in Europe (Belgium, France, Germany, the Netherlands, UK), by cohort period**



Source: Jay Ritter's database for USA, Giudici and Roosenboom's database for Europe

Several studies report that VC backed IPOs have peculiar characteristics. Barry, Muscarella, Peavy and Vetsuypens (1990) and Megginson and Weiss (1991) content that professional venture capitalists have a monitoring role on the firm, and may 'certify' its value reducing information asymmetries between the company and the market. On the other hand, venture capitalists may have an incentive to accelerate the IPO to divest their shares, or to force an acquisition, this engendering a conflict of interests with entrepreneurs (Cumming and Macintosh, 2003).

Professional private equity investors do not exit immediately following the IPO, because of reputation and asymmetric information concerns. Bertoni and Giudici (2003) studied IPOs on European 'New Markets' (comprising the Italian Nuovo Mercato), and showed that effectively the IPO is an opportunity to exit the investment. Remarkably, they also find that in almost all cases the divestment is only partial. Institutional investors prefer to maintain a portion of shares even after the IPO. Staged divestments, following the listing, are preferred. The authors hypothesise that investors avoid to sell all their

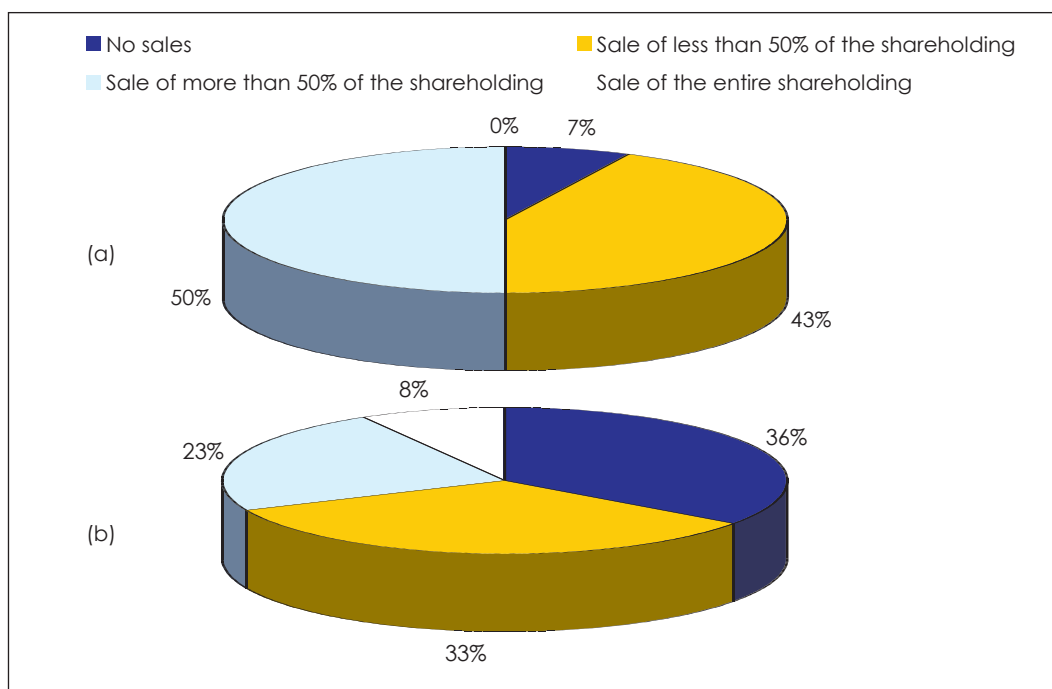
portfolio shares at the IPO, signalling their good expectations about the firm's profitability in the future. Indeed, sales are more frequent, the larger and the older the firm, this suggesting that VCs are more willing to exit their investment if the marginal value that they can add to the company is low<sup>9</sup>.

Figure 5 describes the selling behaviour of pre-IPO professional investors in 69 Italian IPOs backed by financial investors and listed from 1995 to 2004, distinguishing between pure venture capitalists and other professional institutional investors (commercial and private banks, mutual funds, financial trusts) and excluding controlling stakes.

Interestingly, in no cases venture capitalists are selling all their shares at the IPO. In 7% of the cases VCs maintain all the shares, and in 43% of the cases they sell less than 50% of their portfolio shares.

Other private equity investors seem to behave in a more diversified manner. In 8% of the cases they do not maintain any shares after the IPO. Yet, in 36% of the cases they do not sell any share. We may hypothesise that in the first case they are pure financial investors, interested only in a capital gain, while in the second case they have strategic long-run relationships with the company, and intend to remain in the shareholding.

**Figure 5 - Secondary sales by venture capitalists (a) and other pre-IPO professional private equity investors (b) in Italian IPOs <sup>(1)</sup>**



(1) Sample: 69 IPOs in Italy between 1995 and 2004 and backed by financial non controlling investors

(9) An analysis of the profitability of IPO professional investors' strategies in Italy is contained in Cassia, D'Adamo and Paleari (2002).



Institutional investors play a key role even in the buy-side of the IPO, because they help the company to market the offering and to reduce information externalities (Benveniste, Busaba and Wilhelm, 2002). Giorgino, Giudici and Paleari (2001) report that in Italy from 1994 it is common that the offering allotted to retail investors is alongside a private placement of shares reserved to institutional investors<sup>10</sup>. This tendency does not characterise only the Italian market, but even all developed countries (Sherman, 2004; Ljungqvist, Jenkinson and Wilhelm, 2003).

It is important to notice that the ‘rules of the game’ in the private placement are deeply different from those characterising the offer for retailers. There is no discrimination in the offer for retail investors: at worst, if the demand of shares is larger than the supply, investors are equally rationed. On the contrary, underwriters have full discretion in allotting shares to professional investors. To such extent, before the offering<sup>11</sup>, the underwriters use to contact potential IPO subscribers and collect indicative bids, with or without limit price. Such activity is known as ‘book building’.

IPO prospectuses usually report a minimum number of shares to be allotted to retail investors, and a maximum number of shares to be allotted to institutional investors. Yet, most of the times, intermediaries can ‘adjust’ the terms above, in order to compensate scarce demand for shares deriving from one of the two classes of investors.

Interestingly, in Italy the fraction of shares effectively allotted to the private placement, especially in small offerings, is generally larger than the tranche for retailers. Table 4 highlights that the fraction of IPO shares effectively allotted to professional investors has been increasing. This fraction tends to be larger in the case of small offerings and IPOs on the Nuovo Mercato. On the average, only 35% of the shares have been allotted to retail investors and 65% to institutions.

Book building activity allows the underwriter to collect information and learn about professional investors’ demand. Benveniste and Spindt (1989) demonstrate that book building induces truthful revelation of information about the firm’s value, since the underwriter may discriminate among the investors and reward the most optimistic ones in allotting the IPO shares.

Overall, the underwriter may establish long term relationships with other professional investors (Sherman, 2000). A typical bank underwrites multiple security offerings and interact repeatedly with the same investors in different contexts. Likely, the underwriter of an IPO will be interested to purchase shares in future offerings, that will be underwritten by financial intermediaries interested in participating in the present offering.

Cornelli and Goldreich (2001) and Jenkinson and Jones (2004) show that large bids and ‘regular’ investors (i.e. institutional investors bidding shares in all offerings and committing not to sell the IPO shares in the short-run) are generally favoured in the allotment.

A further tendency of Italian IPOs during the last 20 years has been the involvement

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(10) The first IPO partially allotted to institutional investors has been IMI in 1994.

(11) In Europe the underwriter may solicit investors prior to the issuer actually filing to go public. In the US this is strictly prohibited. Before contacting the investors, the company and the intermediaries must present a registration statement and issue a preliminary IPO prospectus.

of managers, employees and strategic clients in the offering, as to provide valuable incentives through stock ownership. From 1985 to 1988 only 12 issuers (17% of total companies) offered specific conditions to employees and managers willing to subscribe shares. In 1989-1994 managers and employees joined the IPO in 7 cases (37% of total companies). From 1995, about 75% of the issuers reserved tranches of shares to managers and employees (see table 4).

**Table 4 - Offering characteristics of Italian IPOs from 1994 to 2004**

Year	Total IPOs	IPOs with private placement	Private placement (% on IPO proceeds)	IPOs with green shoe	IPOs with bonus share	IPOs with facilities for employees
<b>Main market (MTA) and Mercato Ristretto / Expandi</b>						
1994	3	3 (100.0%)	54.6%	-	2 (66.7%)	3 (100.0%)
1995	11	9 (81.8%)	57.6%	2 (18.2%)	1 (9.1%)	7 (63.6%)
1996	13	12 (92.3%)	58.6%	7 (53.8%)	-	12 (92.3%)
1997	10	10 (100.0%)	63.2%	5 (50.0%)	-	8 (80.0%)
1998	16	16 (100.0%)	62.9%	13 (81.2%)	-	14 (87.5%)
1999	21	20 (95.2%)	59.1%	16 (76.2%)	2 (9.5%)	13 (61.9%)
2000	12	12 (100.0%)	56.4%	10 (83.3%)	1 (8.3%)	8 (66.7%)
2001	13	13 (100.0%)	70.3%	13 (100.0%)	1 (7.7%)	10 (76.9%)
2002	6	6 (100.0%)	71.5%	6 (100.0%)	-	3 (50.0%)
2003	4	4 (100.0%)	71.5%	4 (100.0%)	2 (50.0%)	4 (100.0%)
2004	8	8 (100.0%)	76.3%	8 (100.0%)	2 (25.0%)	6 (75.0%)
<b>Total</b>	<b>117</b>	<b>113 (96.5%)</b>	<b>63.1%</b>	<b>84 (71.8%)</b>	<b>11 (9.4%)</b>	<b>88 (75.2%)</b>
<b>Nuovo Mercato</b>						
1999	6	6 (100.0%)	63.8%	4 (66.7%)	-	3 (50.0%)
2000 (first half)	8	8 (100.0%)	70.7%	7 (87.5%)	-	7 (87.5%)
2000 (second half)	22	22 (100.0%)	71.3%	22 (100.0%)	-	16 (72.7%)
2001	4	4 (100.0%)	75.9%	3 (75.0%)	-	4 (100.0%)
<b>Total</b>	<b>40</b>	<b>40 (100.0%)</b>	<b>70.5%</b>	<b>36 (90.0%)</b>	<b>-</b>	<b>30 (75.0%)</b>
<b>Grand total</b>	<b>157</b>	<b>153 (97.4%)</b>	<b>65.0%</b>	<b>120 (76.4%)</b>	<b>11 (7%)</b>	<b>118 (75.2%)</b>

## 2.2 Clauses introduced in the IPO prospectus

Up to the early 1990s, IPOs in Italy did not provide for peculiar clauses in the prospectus, that must be issued before the offering.

In 1995, the IPO of Brembo introduced for the first time in Italy the ‘green shoe’ option, that became immediately common practice in following IPOs (see table 4; from 2002 to 2004 all the sample companies granted the green shoe option).

The green shoe option allows the underwriter to place a further fraction of IPO shares on the market (generally between 10% and 15% of the IPO shares within 30 days from the listing). Such option, not surprisingly, is generally exercised when the demand of shares is larger than the supply.

Several studies (Asquith, Jones and Kieschnick, 1998; Aggarwal, 2000) depict how the green shoe option plays an important role in the strategies of the underwriter. In fact, it is common practice that the underwriter assigns an amount of shares to IPO subscribers that is larger than the IPO size (‘overallotment’). The short position of the underwriter is then covered in the days after the listing in one of two ways.



The first one is the exercise of the green shoe option. This choice is made if the market performance of the share in the first days of trading is satisfying. In this case, the profit for the underwriter is the fee paid by IPO promoters for placing the further amount of shares. The second alternative is to repurchase shares on the open market. This choice is made if the market performance in the first days of trading is poor. The arbitrage profit for the underwriter is given by the difference (in this case positive) between the IPO price and the market price. A further result obtained by the underwriter is to support the demand for shares of weakest IPOs. Plainly, the overallotment practice is a win-win strategy for the underwriter.

The intervention of IPO intermediaries in the aftermarket is commonly indicated as ‘stabilization activity’ and is commonly notified in advance in IPO prospectuses. Underwriters are interested in not deluding IPO investors, so that they often engage in supporting weak IPOs, if the market price tends to go below the offer price (Benveniste, Busaba and Wilhelm, 1996). Furthermore, intermediaries must contrast ‘flipping’ activity, i.e. investors who receive an IPO allocation and sell them immediately in the aftermarket, in case of positive first-day return, in order to lock in quick profits.

Price stabilization is typically limited in the short run (Schultz and Zaman, 1994). Price support may appear a warranty for IPO investors at first glance (Chowdry and Nanda, 1996). On reality, combined with overallotment, it may generate trading revenues for the financial intermediaries.

Unfortunately, underwriters’ trading in the open market is not transparent in Italy. Data about IPO shares allocation to institutional investors are not publicly available, as well as notices of trading by underwriters and IPO promoters after the listing are not systematically collected with proper details. CONSOB collects official bulletins from underwriters (as requested by article 15, comma 3 of CONSOB Rules N. 11971), but they are often generic, and do not report time, prices and quantity of the contracts.

Another new clause introduced in Italy in the early 1990s in IPO prospectuses is the lock-up agreement. Lock-up clauses (or ‘lock-in’) are issued by controlling shareholders and other insiders that commit not to sell their portfolio shares within a certain period of time after the listing.

By committing not to sell their shares (that often after the listing represent still the majority of the equity capital), inside shareholders signal their positive expectation about the firm value in the future, and refrain from taking opportunistic advantage of eventual temporary overvaluation of the firm in the short run. Lock-up agreements also stabilise the market price, because in the short run they prevent excessive pressure on the supply side. In the long run, the market can reduce information asymmetries existing at the IPO. In the meanwhile, inside shareholders are prevented from exploiting their superior knowledge about the firm quality.

Lock-up agreements in Italy are regulated by Section 2.2.3 of the market rules and regulations. Borsa Italiana, in order to protect investors in IPOs, decided to impose lock-up agreements to firms listing on the Nuovo Mercato, because they are generally younger and less mature than companies going public on the main board. Therefore, information asymmetry and uncertainty should be more pronounced in such cases.

In detail, pre-IPO shareholders (as well as company founders, managers and directors) must commit not to sell at minimum 80% of their portfolio shares after the IPO, for one year. Shareholders different from directors owning less than 2% of the equity capital are exempted. More strict provisions are required for start-up companies (i.e. companies established in the preceding 12 months), whose shareholders are requested to lock-up the totality of their shares for one year, and 80% of the portfolio shares for 2 years.

Academic studies about lock-up agreements up to now focussed the attention on what happens at lock-up expiration. Most of the researches highlight an increase in the turnover volume and negative abnormal market performance, both before the expiration and in the following days<sup>12</sup>. A more negative return is found, the smaller the company and the larger the fraction of locked shares owned by institutional investors (banks, investment trusts, venture capitalists). The results contradict the hypothesis of efficiency of the markets, since the time of expiration is known in advance by investors and no particular reactions should be present in the preceding days.

Bertoni, Giudici, Randone, Rochira and Zanoni (2002) studied lock-up agreements in Italian IPOs and highlighted that in many cases companies listed on the Nuovo Mercato voluntarily extended the terms of lock-up agreements, both in term of number of shares locked, and expiration. Coherently with the literature, a negative abnormal return has been found, on average, in the days preceding the expiration, and an increase in the turnover volume. The negative return is particularly severe if the expiration coincides with the minimum lag of time required. The authors hypothesise that investors discount uncertainty about the behaviour of inside shareholders after the expiration of the lock-up contract, that might be willing to divest their shares. Yet, the authors find that effective sales are less relevant than expected.

Interesting results are pointed out also for the main board of Borsa Italiana (MTA). Almost all companies listed in the late 1990s, albeit not obliged, signed lock-up agreements at the IPO, even if the time of expiry is on average shorter than in the Nuovo Mercato<sup>13</sup>. Nevertheless, for such companies no significant reactions are detected around the date of expiry.

The 'bonus share' clause (additional shares assigned for free to investors retaining IPO stock up to a certain deadline) has been exclusively introduced in privatization offerings (the first case has been IMI in 1994, followed by other 9 cases, listed in table 4). Yet, in 2004 for the first time such clause has been adopted by a private company, Panaria Group, although limitedly to employees.

A quite new clause that appeared in Italian IPOs is the so called 'remedy share'. It is a commitment by the IPO promoters, that additional shares will be assigned for free to

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(12) For the US market see Brav and Gompers (2003), Aggarwal, Krigman and Womack (2002), Bradley, Jordan, Roten and Yi (2001), Brau, Lambson and McQueen (2001), Field and Hanka (2001), Ofek and Richardson (2000); for the UK see Espenlaub, Goergen and Khurshed (2000).

(13) Yet, voluntary lock-up provisions generally are designed to allow pre-IPO shareholders to trade their shares only with the permission of the underwriter. Such permission, as reported in many prospectuses, 'will not be unreasonably withheld'. The evidence of no investors' reaction close to the expiration of voluntary lock-ups may be related to the expectation that pre-IPO shareholders are probably able to sell their shares even before.



subscribers, in the case that the business targets declared in the prospectus (typically referring to profitability, increase in revenues and customers, operating margin) will not be reached. The first firm to adopt such a kind of commitment has been Trevisan in 2003.

### **2.3 The setting of the IPO price**

The decision of the IPO price is one of the most crucial phases of an IPO. The choice of a 'low' offer price will be good news for investors, but bad news for incumbent shareholders, because they are forced to sell a portion of the equity capital at a reduced price, transferring wealth to IPO investors. On the contrary, the choice of a 'high' price could cause the failure and withdrawal of the offering.

The process of IPO pricing in Italy has deeply evolved during the last twenty years. Up to the mid 1980s organising auctions for IPO shares was not uncommon<sup>14</sup>. Auctions are an efficient mechanism in maximizing IPO expected proceeds (Biais, Bossaerts and Rochet, 2002) but they afford the issuer and the underwriter the least amount of control in determining the IPO outcome. The most common practice, on the contrary, was to fix the price before the IPO and publish it in the prospectus, not conditional on investors' demand.

In 1989, for the first time, the IPO of Enimont was marketed setting the offer price after the publication of the prospectus. The document contained a price range, with a lower bound and an upper bound for the final IPO price, which was decided after the collection of bids from institutional investors (book building) and however before the public offering. Such procedure has prevailed in Italy in the following years, although with progressive changes. The last IPO with price fixed in the prospectus was Banca Carige in 1995.

The literature highlights that setting the IPO price after the publication of the prospectus has several advantages compared to auctions and fixed-price offerings, and this is the reason why it has become predominant in Europe in the 1990s combined with book building (Benveniste and Busaba, 1997; Derrien and Womack, 2003).

In 1999, the IPO of Banca Monte dei Paschi di Siena for the first time was priced after the public offering. That means that retail investors did not know exactly the IPO price when bidding shares. The only information was the (binding) price range published in the prospectus and the maximum (binding) price published on newspapers two days before the public offering.

In 1999 and 2000 respectively, the IPOs of BasicNet and Caltagirone Editore introduced a further innovation. In the first case only a minimum price was filed (with no indications about the maximum price in the prospectus). In the second offering, the price range published in the prospectus was not binding, but only indicative. Therefore, the IPO price in theory could be even over the upper bound, or below the lower bound. In any case, a maximum (binding) price is published within the last day before the end of the public offering (article 9, comma 1 of CONSOB Rules N. 11971).

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(14) The last IPOs marketed through an auction in Italy were Faema (1986), Finarte (1986), Del Favero (1986).

The offerings with no price range published in the prospectus have been BasicNet, e.Biscom, Panaria Group and Geox.

Table 5 describes the evolution of the IPO pricing procedure in Italy in the last 20 years. Fixed price IPOs prevailed up to 1994, while the filing of a binding price range prevailed up to 2000. Nowadays the most diffused procedure to price an IPO is to indicate a referring (but not binding) range in the prospectus, to set the maximum price before the public offering and the final price after the collection of bids from retailers.

**Table 5 - IPO pricing procedures adopted in Italian IPOs, from 1985 to 2004**

IPO pricing procedure	1985-1988	1989-1994	1995-1997	1998-2000	2001-2004	Total sample
Auction	3	-	-	-	-	3
Price fixed in prospectus	66	12	1	-	-	79
Price range (binding) in prospectus, and IPO price determined before public offering	-	7	33	30	-	70
Price range (binding) in prospectus, and IPO price determined after public offering	-	-	-	29	-	29
Price range (not binding) in prospectus, and IPO price determined after public offering	-	-	-	24	33	57
No price range in prospectus; IPO price determined after public offering	-	-	-	2	2	4

It is clear that the tendency of the Italian market has been to converge to the IPO procedure adopted in the US. At the same time, IPO issuers tended to postpone as much as possible the decision of the final offer price, in order to incorporate in the decision all information produced in the meanwhile, about the IPO shares demand and the market momentum.

But, what is the main driver of IPO pricing? A first valuation of the company is carried out adopting the discounted cash flow (DCF) methodology and the comparables approach (Kim and Ritter, 1999). Considerations about the general market momentum (bullish or bearish) are also taken into account<sup>15</sup>.

The revision of the final offer price, with respect to indications contained in the prospectus, reflects (private) information collected during book building and in the pre-IPO phase, and (public) information about eventual changes in the market momentum.

The literature highlights that such adjustment is often partial, i.e. it does not reflect all information (private and public) collected by the issuing firm and its intermediaries. Hanley (1993) documents that the initial return is larger, the more optimistic is the revision of the offer price, this suggesting that intermediaries intentionally do not incorporate all good news in the pricing of the IPO. Lowry and Schwert (2002) shows that negative market movements during the IPO process are fully impounded into the final price, while positive index returns are not. Loughran and Ritter (2002) attribute this evidence to issuers

(15) An analysis of the evaluation methodologies in recent IPOs in Italy is contained in Cassia, Paleari and Vismara (2002).



not bargaining hard for a higher offer price when unexpectedly positive information arrives from the market.

Aussenegg, Pichler and Stomper (2003) show that in Europe IPO prices are more ‘sticky’ than in the US, i.e. revision from the prospectus price range is less frequent and IPOs are almost never priced outside the initial range.

Table 6 contains data about price revision in Italian IPOs, compared to the file range published in the prospectus. Considering IPOs in which the prospectus range has been binding, the revision has been positive in many cases, especially in 1998-2000. Only in 7 cases the price has been set at the minimum level, while in 28 cases the final price has been the maximum price allowed.

When the prospectus range was not binding, optimistic revisions have been much less frequent. In no cases the IPOs have been priced above the maximum limit. In several cases, on the contrary, the final price has been lower than the minimum limit.

**Table 6 - Offer price revision, compared to the prospectus range, by IPO year <sup>(1)</sup>**

Revision	1989-1994	1995-1997	1998-2000	Total sample
(a) binding range (99 IPOs)				
The IPO price is the maximum price of the range	-	9	19	28
The IPO price is comprised between the maximum price and the midpoint price of the range	3	7	21	31
The IPO price is the midpoint price of the range	1	2	3	6
The IPO price is comprised between the midpoint price of the range and the minimum price	3	13	11	27
The IPO price is the minimum price of the range	-	2	5	7
Revision	1998-2000	2001-2004	Total sample	
(b) not binding range (57 IPOs)				
The IPO price is the maximum price of the range	2	-	2	
The IPO price is comprised between the maximum price and the midpoint price of the range	6	2	8	
The IPO price is the midpoint price of the range	-	-	-	
The IPO price is comprised between the midpoint price of the range and the minimum price	7	12	19	
The IPO price is the minimum price of the range, or lower than the minimum price	9	19	28	

(1) Sample: 156 IPOs on the Italian Exchange from 1995 to 2004, with a price range filed in the prospectus

## 2.4 The initial return and the long run performance

The initial return of IPO shares is one of the most studied evidence on financial markets. On average, considering wide samples of IPOs in several countries, the first-day price is found to be statistically higher than the offer price (Loughran, Ritter and Rydqvist, 1994). Such evidence is commonly indicated as IPO ‘underpricing’.

The explanations of IPO underpricing advanced by the literature are essentially related to:

- market ‘fads’, noise trading and investors’ irrational or herding behaviour (Aggarwal and Rivoli, 1990; Welch, 1992); Miller (1977) suggests that the initial IPO

performance may be biased by the most optimistic investors;

- intermediaries' risk aversion in pricing IPO shares (Baron, 1982), or willingness to reduce the selling efforts, attract the market's attention and 'leave a good taste in investors' mouth' (Ibbotson, 1975);
- signalling the superior quality of the issuing firm (Allen and Faulhaber, 1989; Grinblatt and Hwang, 1989; Chemmanur, 1993); the issue of underpriced shares is a costly (but credible) signal of the firm's quality and allows the issuer to stimulate the information production in the aftermarket and raise more proceeds in a follow-on offering (Jegadeesh, Weinstein and Welch, 1993);
- rationing of poorly informed investors (Rock, 1986); IPO shares must be underpriced in order to convince poorly informed investors to join the offerings, because they face the competition of informed professional investors in good-quality IPOs. The latter investors use their superior knowledge to 'cherry-pick' the best offerings and avoid overpriced issues. Therefore the allocation of uninformed investors is biased towards overpriced shares;
- information asymmetries between the issuing party and the market; IPOs are intentionally underpriced in order to reward investors for revealing their expectations about the firm's value in the pre-market phase (Benveniste and Spindt, 1989; Hanley, 1993); this implies that offer prices are only partially revised in response to positive information supplied by professional investors, in order to generate underpricing.

In world wide markets, the mean IPO underpricing in 1999-2000 surged to unprecedented levels, this rising the interest for IPO pricing<sup>16</sup>. Ljungqvist and Wilhelm (2003) and Loughran and Ritter (2004) attribute the IPO underpricing explosion to changes in issuers' incentives (reduced insider pre-IPO ownership, more frequently companies raising new capital and less frequent offers of existing shares, all these determinants reducing the incentive to decrease the initial underpricing), to changes in firms' characteristics (younger and more risky firms, with low profitability and operating in technology sectors, joined the markets), and to collusion between intermediaries and issuing companies, interested in attracting investors' attention and engaging in illegal agreements<sup>17</sup>.

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(16) In the USA, the largest IPO initial return was VA Linux in 1999 (+697.50%). From 1985 to 1997, 23 IPOs doubled in price after the first day of trading, while in 1998-2000 such number grew up to 206 IPOs, and in 2001-2004 it fell down to zero. In Europe, 76 IPOs more than doubled the offer price after the first day of listing in 1998-2000, while this happened only in 2 cases from 1990 to 1997. In Italy the most astonishing case was the IPO of Finmatica in 1999 (initial return +637%).

(17) In the US during the 'tech bubble' the market authorities revealed 'quid-pro-quo' arrangements between the underwriters, the managers of the issuing companies and the institutional investors. In return for the allotment of underpriced shares, the investors directed out-of-the-market commissions to the underwriter. Underpriced shares have been also allotted to managers of firms close to the listing, in order to catch their favour and obtain the deal mandate ('spinning'). Allocations were sometimes made contingent on the investors agreeing to buy additional shares at a higher price in the aftermarket ('laddering'). Loughran and Ritter (2004) also suggests that intentional underpricing has been used to 'buy' analysts' additional coverage, in order to increase trading commissions for the banks and win new underwriting business.



The IPO underpricing in Italy has been tracked up to 2001 by Cassia, Giudici, Paleari and Redondi (2003). The authors find that, during the pricing process, intermediaries seem to ‘low-ball’ the IPO value, as they do not fully incorporate private and public information in the final offer price, since the initial underpricing is correlated with the revision of the file range (the more optimistic the revision, the larger the initial return) and with the recent market movements.

Cassia, D’Adamo and Paleari (2001) showed that the initial return of Italian IPOs, if weighted by the probability of shares being effectively allotted to retail investors (measured by the oversubscription ratio in the public offer), is not significantly different from zero, coherently with the ‘winner’s curse’ theory of rationing by Rock (1986). This suggests that, as pointed out by Aggarwal, Prabhala and Puri (2002) in the US, institutional investors are generally favoured and receive preferential allocations compared to small retail investors.

**Table 7 - Mean IPO underpricing in Italy**

Year	IPOs	Underpricing (%)		
		Mean	Positive	Negative
Borsa (MTA) and Mercato Ristretto / Expandi				
1985	9	80.83%***	9	-
1986	32	40.40%***	27	5
1987	17	11.94%*	11	6
1988	11	-0.35%	5	6
1989	7	47.92%	6	1
1990	3	71.93%**	3	-
1991	4	0.21%	3	1
1992	2	-9.66%	1	1
1993	-	-	-	-
1994	3	8.12%	2	1
1995	11	7.85%***	10	1
1996	12	10.49%**	10	3
1997	10	11.18%**	9	1
1998	16	9.66%*	10	6
1999	21	32.92% <sup>(1)</sup>	13	8
2000	12	4.34%	9	3
2001	13	-0.28%	3	10
2002	6	-1.14%	1	5
2003	4	-1.41%	2	2
2004	8	2.63%	5	3
Total	202	19.87%***	139	63
Nuovo Mercato				
1999	6	40.15%***	6	-
2000 (first half)	8	64.84%**	7	1
2000 (second half)	22	4.71%	8	14
2001	4	1.14%	3	1
2002-2004	-	-	-	-
Total	40	21.69%**	24	16
Grand total	242	20.17%***	163	79

\*, \*\*, \*\*\* Statistically different from zero at the 90%, 95%, 99% levels respectively

(1) Excluding the IPO of Finmatica, the mean value is equal to 7.94%\*

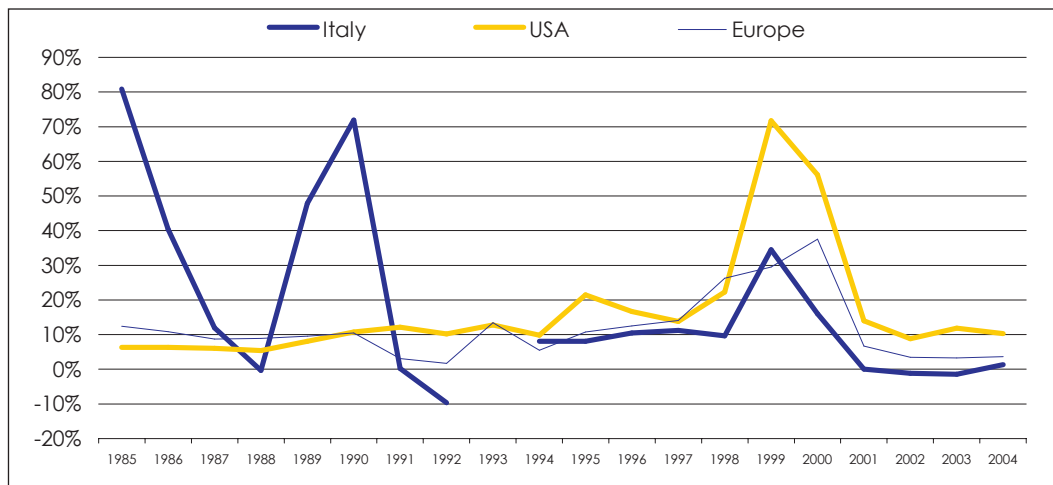
At the European level, Giudici and Roosenboom (2004) analyse a sample of 1,120 IPOs from 1990 to 2002. They find an average initial underpricing equal to 12.0% in main markets and 34.3% in 'new markets'. The difference is partially explained by two determinants. First, pre-IPO owners of 'new market' companies, especially CEOs and directors, sell less shares at the IPO, this reducing the incentive to control underpricing. Second, 'new market' companies are younger, riskier, less profitable and thus characterized by higher valuation uncertainty.

Table 7 updates the mean IPO underpricing registered from 1985 to 2004<sup>18</sup>.

Table 7 shows that in recent years the mean underpricing level in Italy has been decreasing, often down to negative values, not statistically different from zero. This rises the objective to find out the determinants of such pattern. Cassia, Giudici, Paleari and Redondi (2003) suggest that the progressive reduction of the underpricing is related to the adoption of book building (that allows underwriter to gather information about the demand of shares), as opposed to fixed price offerings. Furthermore, the lag of time between the offering and the listing has dramatically reduced, from a median value of 96 days in 1985-1988 to 8 days in 2001-2004, this reducing the probability that market conditions are not fully incorporated in the pricing of the IPOs.

Figure 6 plots the annual mean IPO underpricing in Italy, in the USA and in the other major European countries.

**Figure 6 - Mean IPO underpricing from 1985 to 2004 in the US, in Italy and in Europe (Belgium, France, Germany, the Netherlands, UK) <sup>(1)</sup>**



(1) No IPOs were registered in Italy in 1993

Source: Jay Ritter's database for USA, Giudici and Roosenboom's database for Europe

Interestingly, figure 6 reports that from 1994, with the advent (and the follow-on evolution) of book building, the IPO pricing process in Italy has become as efficient as in

(18) The underpricing for IPOs on the Mercato Expandi (formerly 'Mercato Ristretto') is as follows: Gildemeister (1996) +10.72%; SICC (1998) +14.00%; CIT (2002) +5.42%; Greenvision (2004) +14.29%; RGI (2004) +5.52%.



the US and in other European countries, being the initial return even lower than reported in such countries.

To some extent, Italy has been exempted by the surge in three-digits IPO underpricing experienced in 1999-2000, that was limited to a few companies (Finmatica, Gandalf, CHL, I.net).

Curiously, as well as IPO shares are generally underpriced at the listing, in the long-run (i.e. two or three years after the listing) they tend to underperform the market index (Ritter, 1991) and a portfolio of comparable listed companies (Loughran and Ritter, 1995). In other words, investing in a portfolio of IPO shares is a strategy dominated by investing in a portfolio replicating the market index. Underperformance is documented in many countries and is generally concentrated among smaller issuers, and in years with heavy IPO volume.

The simplest and most intuitive measure for IPO long run performance is the buy-and-hold abnormal return (BHAR), equal to the difference between the return an investor would earn buying IPO shares on the first trading day and selling them at the end of the time horizon, and the return of the reference portfolio<sup>19</sup>. The reference portfolio can be a market index (yet this choice does not control for issuer-specific risk characteristics), a matching portfolio of comparable firms, or the expected return defined by an asset pricing model (CAPM, APT, Fama & French three-factor model). Obviously the choice of alternative benchmarks may lead to competing results<sup>20</sup>.

The literature advances several explanations for IPO long run underperformance. Jain and Kini (1994) and Mikkelsen, Partch and Shaw (1997) find that the raw operating performance of issuers declines significantly after the listing. This may suggest that managers try to time the IPO when the operating performance peaks, aware of the fact that current profitability is not sustainable in the long-run. Therefore, investors get a misleading impression of the firm profitability health. Moreover, Teoh, Welch and Wong (1998) suggest that managers may be tempted to 'window-dress' earnings prior to the IPO through discretionary accounting management (for example inflating pre-IPO reported sales and accruals). Earnings management biases investors' expectations leading to initial overvaluation and resulting in long-run downward revisions of market prices.

The 'divergence of opinion' hypothesis by Miller (1977) predicts that in the short run the market price of IPOs is set by most optimist investors, while in the long run, as uncertainty is reduced and diversity of opinion decreases, investors' valuation converges towards poor returns. Biased earnings forecasts by analysts may feed overoptimism and retards the long-run price correction (Rajan and Servaes, 1997). Indeed, affiliated analysts

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(19) The BHAR approach involves monthly compounding over the time horizon, and closely resembles the actual investors practice. An alternative approach is computing the cumulated abnormal returns (CARs), given by the sum of the monthly excess returns. CARs are biased estimators of long run performance, but have an advantage over BHARs with respect to distributional properties and test statistics (Barber and Lyon, 1997).

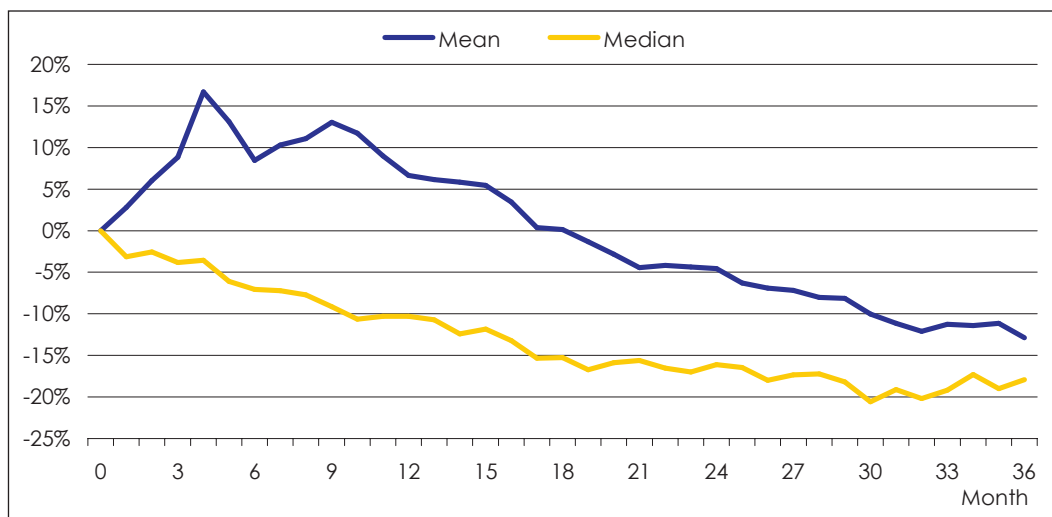
(20) Foster-Johnson, Lewis and Seward (2000) demonstrate that the long run poor performance is mainly caused by a small number of companies ('busted' IPOs) that rapidly go default after the listing. Surviving companies do not significantly underperform the market index. Brav, Geczy and Gompers (2000) show that IPO underperformance is not significant when issuers are matched with comparable firms based on size and book-to-market ratio.

are inclined to issue biased recommendations as a way to win and maintain banking business, and raise trading commissions (Loughran and Ritter, 2004).

In Italy, Giordano, Giudici and Paleari (2001) showed that on the average IPOs severely underperform the market index. Figure 7 reports updated data about the market performance (BHARs, buy-and hold abnormal returns) of Italian IPOs from 1985 to 2001, and traded for at least three years, compared to the MSCI Italy country index.

Interestingly, the BHAR mean value is positive in the short run, and turns to negative values after 18 months. The median value is negative both in the short run and to a larger extent in the long run. Thus, a small number of IPOs significantly overperform the market index, while a large number of issuers exhibit long run underperformance. On the average, the long run underperformance is equal to +6.63% (plus indicating overperformance) after 12 months (median value -10.30%), -4.57% after 2 years (median value -16.10%) and -12.87% after 3 years (median value -17.90%). Ritter and Welch (2002) report a mean 3-year BHAR for US IPOs during the same sample period equal to -21.7%.

**Figure 7 - Long run IPO buy-and-hold adjusted returns (BHARs) <sup>(1)</sup>**



(1) Sample: 212 IPOs in Italy from 1985 to 2001, traded for at least 3 years

Table 8 separately reports the long run performance of IPOs listed on the main board of the exchange, compared to the country market index return, by listing year. The underperformance is particularly severe if the months following the IPO are characterized by positive index movements (for example in 1986 and 1997-2000). On the contrary, companies listed in recent years (especially in 2001) seem to overperform the general market index.

Table 9 reports the long run performance of IPOs listed on the Nuovo Mercato, compared to the country market index return, by listing year. Shares listed following an IPO in 1999 initially exhibit good performance, but the effect of the burst of the dot.com bubble causes negative relative returns in the long run. Shares listed following an IPO in 2000 and 2001 exhibit significant negative returns.



**Table 8 - Long run market performance of IPO shares on the main market (MTA), by listing year <sup>(1)</sup>**

Listing year	IPOs	Long run adjusted market performance		
		12 months	24 months	36 months
1985	9	-72.51%	-52.39%	-28.83% <sup>(2)</sup>
1986	32	9.97%	9.03%	19.13%
1987	17	1.17%	8.49% <sup>(2)</sup>	13.47% <sup>(2)</sup>
1988	11	20.34%	29.41%	34.23%
1989	7	30.59%	36.27%	-5.11%
1990	3	-6.43%	-19.95%	-66.31%
1991	4	-10.69%	-79.61% <sup>(2)</sup>	-98.61% <sup>(2)</sup>
1992	2	-67.37%	-104.36%	-109.04%
1993	-	-	-	-
1994	3	-4.68%	-1.68%	-8.15% <sup>(2)</sup>
1995	11	18.04%	0.69%	-43.11%
1996	12	-47.35%	-57.99%	-64.05%
1997	10	-53.16%	-67.80%	-98.10%
1998	15	13.16%	66.51% <sup>(2)</sup>	1.38% <sup>(3)</sup>
1999	21	63.31%	8.17%	-2.79%
2000	12	15.48%	15.28%	10.60% <sup>(2)</sup>
2001	13	21.97%	17.83%	26.22% <sup>(3)</sup>
2002	5	-2.77%	18.21%	n.a.
2003	4	5.54%	n.a.	n.a.
<b>Total</b>	<b>191</b>	<b>5.46%</b>	<b>1.09%</b>	<b>-9.80%</b>

(1) Mean stock return from the closing price of the listing day, adjusted with the country market index performance during the same period.

(2) One company is excluded because delisted

(3) Two companies are excluded because delisted

**Table 9 - Long run market performance of IPO shares on the Nuovo Mercato <sup>(1)</sup>**

Listing year	IPOs	Long run adjusted market performance		
		12 months	24 months	36 months
1999	6	205.63%	47.21%	-15.64%
2000	30	-26.35%	-31.06%	-34.37% <sup>(2)</sup>
2001	4	-29.30%	-19.08%	-3.50%
<b>Total</b>	<b>40</b>	<b>8.15%</b>	<b>-18.12%</b>	<b>-28.17%</b>

(1) Mean stock return from the closing price of the listing day, adjusted with the country market index performance during the same period

(2) Two companies are excluded because delisted

### 3. Conclusions

The IPO is one of the most significant events in the life of a company, altering its financial and governance structure, and has strategic implications for its ability to compete in the marketplace. Yet, IPOs matter too more than just the issuing company and participating investors because they have an effect on the entire economy. The causal link between stock market development and economic growth reveals the overall benefit from firms going public. The recycling of equity capital, knowledge and competences from successful ventures to new start-ups, facilitated by IPOs, encourage investments in new technologies and emerging industries. Consequently, policy-makers should take a keen interest in ensuring that the IPO market functions efficiently.

This work reviews the evolution of the IPO market in Italy in the last 20 years. Data and statistics about firms and issue characteristics have been compared with tendencies highlighted by the international state-of-the-art of the literature.

The results of this research challenge the commonplace that Italian firms go public when they are mature and do not need to finance future growth. Indeed we highlight that younger and less profitable firms went public, more frequently raising new equity capital. Although closely controlled by incumbent shareholders both before and after the listing, Italian companies making IPOs are now characterised by a less concentrated ownership and are more similar to their European and US counterparts. The role of professional investors, especially venture capitalists, is now stronger in Italian IPOs.

There has been a clear pattern of the Italian IPO market to converge towards the US model, with the introduction of book building and open-price offerings. This led to lower IPO initial underpricing.

Is it possible to further improve the efficiency of the IPO market in Italy?

If used properly, book building discretion can induce investors to become informed and reveal their information about the quality of the offering. Despite its world-wide diffusion in the 1990s, book building is not without its critics, especially in light of the excesses of the dot.com bubble and the revelations of illegal practices by investment banks in the US (not existing, or at least not uncovered, in Italy). To this extent, increased public scrutiny on how intermediaries manage IPOs in Italy (both in shares allotment and trading in the aftermarket) should deter potential abuses.

Clear restrictions on the diffusion of research analyses concerning companies making IPOs are another policy option. In all the major exchanges around the world it is claimed (Loughran and Ritter, 2004) that only a complete separation of investment banking and research into different entities ('chinese walls') will prevent opportunistic behaviour of intermediaries and their affiliate brokers and analysts<sup>21</sup>. Research is costly to undertake and any decline in research adversely affects the informativeness of stock

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(21) For example, in recent years the Securities and Exchange Commission accused several analyst of issuing misleading reports on a company, while conducting a too-close relationship with its officials. During the investigation, the attorneys revealed that analysts privately referred to stocks as 'dogs' while publicly maintaining buy ratings, and received favours and gifts from firms under coverage.



prices, hitting newly listed companies particularly hard. Therefore, the point is inducing analysts to remain unbiased, facilitating (and not hindering) the collection of information.

Pellizzoni (2002) showed that there is a great potential of development for the Italian Exchange in attracting both medium-size and small companies to the listing. This entails designing and enforcing rules for the IPO mechanism that stimulate more firms to join the Exchange and increase the flow of venture capital. A first provision could be the renewal of tax relieves for firms going public. Giudici and Paleari (2003) examine the effect of temporary tax incentives that the Italian government offered for companies going public from 1994 and estimate that the lower tax rate encouraged firms to go public, be more transparent, and report higher earnings than they otherwise would have. Therefore, such a provision could even represent a benefit for the State budget.

A further topic in the agenda concerns small enterprises. Small caps often comply about the poor attention dedicated by institutional investors and analysts, and are often convinced to be under-valued by the market. Recently, some of them went again private, by taking over their own floating shares with tender offers<sup>22</sup>. We believe that the Italian Exchange has adequate infrastructures to host small and medium size companies. It is important to stimulate entrepreneurial small firms to go public, by setting ad hoc incentives, and professional investors to establish funds and trust specialized in investing in small caps.

Finally, investors must be granted sufficient protection rights to guarantee their participation in the public equity market, and to protect the reputation of the Italian Exchange. Giudici and Roosenboom (2004) reported the case of the German *Neuer Markt*, and highlight that after the initial enthusiasm of investors and the impressive flow of new IPOs, the market fell in a deep crisis attributable (among other determinants) to numerous cases of frauds and deceives, that irremediably sank the image of the *Neuer Markt*. The objective to attract more companies to the listing may be in conflict with an adequate selection of candidate IPOs. Nowadays sponsors and listing partners have a relevant responsibility in certifying the quality of issuers at the listing, but this role is less determinant in the aftermarket. The incentive to carefully watch over the company listing following an IPO could be strengthened by compelling intermediaries to subscribe IPO shares and lock them for a certain period, and by giving more prominence in the prospectuses to data, models and frameworks adopted in evaluating the company.

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(22) For example, Idrà Presse, Italdesign Giugiaro, Manuli Rubber, Savino Del Bene.

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